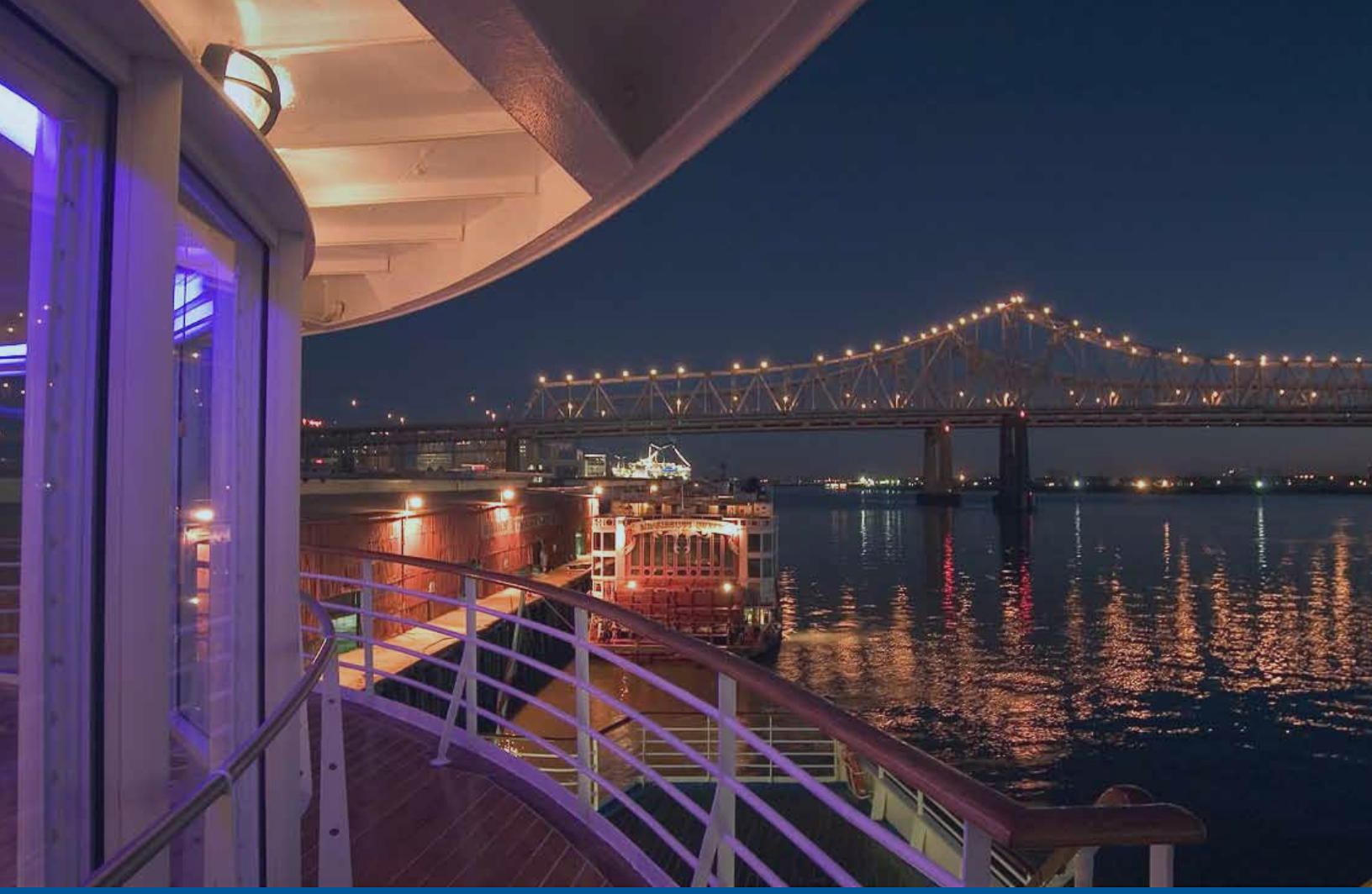

# Usage Case Study: Louisiana Wireless Information Network

September 2011

Homeland Security

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## Louisiana Wireless Information Network

The U.S. Department of Homeland Security's 2006 National Interoperability Baseline Survey determined that fewer than nine percent of emergency response agencies reported using real-time interoperable communications among State and local entities on a daily basis. Using interoperable systems, governance structures, and written agreements on a daily basis is a critical element in preparing jurisdictions for large-scale events. Just six years after being devastated by Hurricane Katrina, the State of Louisiana has achieved one of the most sophisticated levels of communications usage in the Nation.

### Pre-Hurricane Katrina Environment

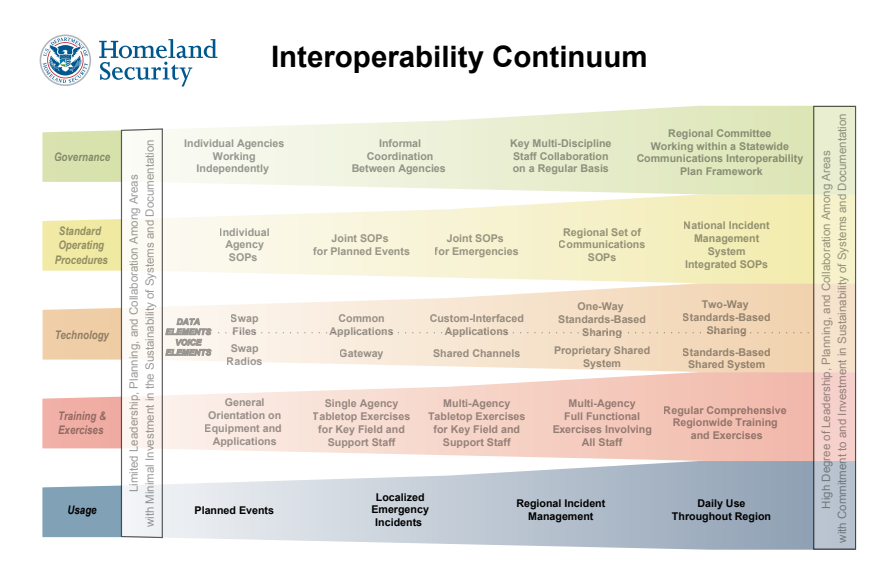
During the 1980s, Louisiana was among the first States in the country to deploy a statewide radio system for the emergency response community. This same radio system became the lifeline for emergency responders during Katrina. Although one of the main radio towers was disabled during the storm, technicians were able to establish a new site within days following the storm. As a result, the system became the only functioning radio system available to responders in New Orleans. However, because the system was not designed for the quantity of traffic experienced during Hurricane Katrina, communications were hampered by ongoing congestion.

### Post-Hurricane Katrina Environment and Daily Use

Following Hurricanes Katrina and Rita, State and local officials came together to focus on a single statewide system that all emergency response officials could use. The system was the first statewide system based on the recently released 700 MHz spectrum and replaced the existing analog system with a Motorola ASTRO25 P25-compliant digital system. Using Federal recovery funding, the system was

### Usage

The Interoperability Continuum is designed to assist emergency response agencies and policy makers to plan and implement interoperability solutions for data and voice communications. This tool identifies five critical success elements that must be addressed to achieve a sophisticated interoperability solution. The fifth critical success element is capiltalize usage. In order to reach the most sophisticated level of interoperability in the Usage lane, the interoperability systems used in the jurisdiction must be used every day for managing routine as well as emergency incidents. In this optimal solution, users are familiar with the operation of the system(s) and routinely work in concert with one another. Success in this lane also is contingent upon progress and interplay across the other four lanes.



initially designed to cover the Greater New Orleans area. However, by leveraging Federal grant funding in addition to State general funding, the State was able to build what is now the largest statewide radio system in the country. It provides daily voice communications to more than 60,000 users at the Federal, State, local, and nongovernmental levels. Of these users, more than 70 percent are from local jurisdictions.

The system, called the Louisiana Wireless Information Network (LWIN), is fully maintained by the State and charges no fees to its users. LWIN provides 95 percent in-building coverage to the nine largest metropolitan areas in the State. In 2010, there were more than 95 million push-to-talk transmissions on LWIN, which utilized more than 114,000 service hours. Out of the 95 million push-to-talk communications, less than one percent of users experienced busy signals. LWIN is currently undergoing a major capacity expansion that will eliminate virtually all busy signals, and expand the system's capacity to accommodate additional users over the next ten years. In addition, once the system's 118 sites are fully operational, users will enjoy 95 percent portable on-street radio coverage throughout the State. With such extensive coverage, responders will experience near seamless communications across Louisiana.

## Governing a Multi-Jurisdictional System

In 2008, Louisiana codified the establishment of the Statewide Interoperability Executive Committee (SIEC), a 20-member governing board that provides governance over LWIN. The board includes six emergency response associations, five State agencies, and nine local representatives. Seventy-five percent of the governing board is comprised of local emergency responders. According to Mark Cooper, the Director of the Governor's Office of Homeland Security and Emergency Preparedness, "the key to being able to create the necessary trust between State and local officials was reducing the number of State agencies on the LWIN governing board. The first SIEC created for Louisiana had a 56 percent majority of members belonging to State agencies. When we had the opportunity to codify the SIEC into law, we changed the makeup of the governing body to a local majority of 75 percent. This was critical for growth and acceptance at the local level." The board also has representation from tribal governments as well as the Federal government.

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*- Mark Cooper, Director, LA Governor's Office of Homeland Security and Emergency Preparedness*

## Performance during Hurricane Gustav

In 2008, Louisiana evacuated the entire coastline of the State during Hurricane Gustav. Nearly two million residents were evacuated, making it the largest evacuation in State history. Paramount to the success of the evacuation was streamlined coordination among all levels of government through LWIN. During the ten-day event, the Greater New Orleans area did not experience any communications outages as LWIN supported more than 1.2 million push-to-talk transmissions. Though four critical communications sites were inoperable due to flooding, the State was able to reconstitute three sites through mobile towers. A fourth site was also connected back to the master site by a Federal Emergency Management Agency (FEMA) Mobile Emergency Response Support asset. "During Hurricane Gustav, we were able to achieve, full interoperability with a multi-jurisdiction and multi-discipline response through a shared radio

*"During Hurricane Gustav we were able to achieve, full interoperability with a multi-jurisdiction and multi-discipline response through a shared radio system. In addition, the system was fully stressed and operated as designed."*

*– Jerry Sneed, Deputy Mayor Public Safety for New Orleans*

system. In addition, the system was fully stressed and operated as designed," stated Jerry Sneed, Deputy Mayor of Public Safety for New Orleans.

## LWIN Response for the Gulf Oil Spill

On April 20, 2010, the Deepwater Horizon Drilling Rig exploded, resulting in a catastrophic release of oil into the Gulf of Mexico. For five months, the entire world watched as responders, engineers, and scientists struggled to contain and resolve the incident. LWIN served as the communications backbone for the U.S. Coast Guard (USCG), and State and local officials. Within 24 hours, an LWIN mobile tower was launched to Mobile, Alabama, and voice communications were established between the Area Command in Robert, Louisiana, and the two Unified Command Groups in Houma, Louisiana and Mobile, Alabama. Within 48 hours, technicians working for the Louisiana Department of Public Safety connected the statewide radio system in Mississippi and the Orange Beach Fire Department radio system in Alabama to LWIN through an IP-based bridging device, effectively establishing voice communications all the way from the Texas/Louisiana border to the Florida Panhandle for the USCG. Louisiana also issued 200 portable radios from the State's cache to allow the USCG to immediately establish voice interoperability.

Within one week, radio systems in the Texas counties of Austin, Houston, and Harris were added to the system through a P25 Inter-RF Subsystem Interface, extending the network, now called GulfWIN, to central Texas. This rapid connection of multiple systems was possible due to the integration of the Communications Unit Leaders (COML) on staff at all levels of government. According to Brant Mitchell, the Chair of the State's Statewide Interoperability Governing Board, "The key to being able to integrate technologies providing communications over an extensive distance was the existing relationships between the Gulf States and the existence of COMLs who facilitated the process and ensured that all involved were speaking the same language and were able to operate on the same page." In addition, Louisiana, Mississippi, and Orange Beach granted access to individuals on all three systems, allowing users to talk along the affected area using a single radio. The system is still connected today and ready to establish interoperability for any event that affects the region.

## Usage during Smaller Scale Incidents

Using interoperable communications throughout a region as a part of day-to-day operations is a key capability because it allows responders to focus on the core mission of public safety. While this may seem trivial, saving just a few minutes can greatly impact the response effort. Recently there was a multijurisdictional incident that exemplified how important interoperable communications is during smaller incidents. On the morning of May 4, 2011, a Louisiana State Trooper was fired upon and grazed in the head by a bullet during a routine traffic stop. During his struggle with the assailant, the trooper was able to call for backup using LWIN. Within minutes, West Baton Rouge Sheriff deputies arrived at the scene to assist.

*"The key to being able to integrate technologies providing communications over an extensive distance was the existing relationships between the Gulf States and the existence of COMLs who facilitated the process and ensured that all involved were speaking the same language and were able to operate on the same page."*

*– Brant Mitchell, Chair*
*LA Statewide Interoperability Governing Board*

*"Whether the law enforcement community is faced with natural or man-made disasters, large scale events such as Mardi Gras, or a lethal encounter on the side of the road, the most critical component for a successful outcome is the ability to effectively communicate,"*

*– Colonel Mike Edmonson, Louisiana State Police Superintendent*

"In a time of crisis, when a trooper, deputy, or officer activates their portable radio, the ability to communicate can be the difference between life and death. The life of one of my troopers was recently

saved due to the heroic actions of West Baton Rouge Parish deputies who heard his call for assistance on Louisiana's shared radio system."

## Conclusion

Moving forward, Louisiana will continue adding new users to LWIN. Although most of these new users will come from within the State, Louisiana will also continue building on the regional relationships established during the Deepwater Horizon oil spill. Louisiana's success stems not only from daily usage, but also from the institution of strong governance, standard operating procedures, technology systems, and training. Leveraging Louisiana's lessons learned, other States and localities can improve all-hazards response during events. Regardless of whether other States follow Louisiana's approach to usage, the incorporation of all lanes of the Continuum are vital to emergency response effectiveness.

*This case study is part of the Office of Emergency Communication's (OEC) 10-Year Anniversary of 9/11 project. OEC will publish six case studies aligning to the Interoperability Continuum and detailing milestones in the areas of governance, standard operating procedures, technology, training and exercises, and usage. Each study will represent the strongest solution from a State, region, city, or town across the Nation and is geared toward the emergency response community.*